We create chemistry

Safety Data Sheet
Neodecanoyl chloride

1. Identification

Product identifier used on the label

Neodecanoyl chloride

Recommended use of the chemical and restriction on use
Recommended use*: Chemical

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification
Molecular formula: C10 H19 O Cl
Synonyms: 7,7-Dimethyl Octenoyl Chloride Use: Only to be used as intermediate according to the REACH Regulation (EC) No 1907/2006, art. 18.

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Flam. Liq.	4	Flammable liquids
Met. Corr.	1	Corrosive to metals
Acute Tox.	1 (Inhalation - vapour)	Acute toxicity
Acute Tox.	4 (oral)	Acute toxicity
Skin Corr./Irrit.	1B	Skin corrosion/irritation
Eye Dam./Irrit.	1	Serious eye damage/eye irritation
Skin Sens.	1	Skin sensitization

Aquatic Acute	3	Hazardous to the aquatic environment - acute
Aquatic Chronic	3	Hazardous to the aquatic environment - chronic

Label elements

Pictogram:

Signal Word:
Danger

Hazard Statement:

H227	Combustible liquid.
H290	May be corrosive to metals.
H330	Fatal if inhaled.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H314	Causes severe skin burns and eye damage.
H402	Harmful to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P260	Do not breathe dust/gas/mist/vapours.
P284	In case of inadequate ventilation wear respiratory protection.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273	Avoid release to the environment.
P272	Contaminated work clothing should not be allowed out of the workplace.
P264	Wash with plenty of water and soap thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P234	Keep only in original container.

Precautionary Statements (Response):

P310	Immediately call a POISON CENTER or doctor/physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P390	Absorb spillage to prevent material damage.
P370 + P378	In case of fire: Use extinguishing powder, foam or CO2 for extinction.

Precautionary Statements (Storage):

P403 + P235	Store in a well-ventilated place. Keep cool.
P233	Keep container tightly closed.
P405	Store locked up.
P406	Store in corrosive resistant container with a resistant inner liner.

Precautionary Statements (Disposal):
P501 Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

Labeling of special preparations (GHS):
Corrosive to the respiratory tract.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAS Number	Weight %	Chemical name
40292-82-8	>= 75.0 - <= 100.0%	neodecanoyl chloride
7647-01-0	>= 0.02 - <= 0.1%	hydrochloric acid

4. First-Aid Measures

Description of first aid measures

General advice:
Remove contaminated clothing.

If inhaled:
Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

If on skin:
Wash affected areas with water while removing contaminated clothing. Remove contaminated clothing. Immediate medical attention required. Wash soiled clothing immediately.

If in eyes:
In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required.

If swallowed:
Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Indication of any immediate medical attention and special treatment needed

Note to physician
Treatment: Treat according to symptoms (decontamination, vital functions), no

known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
dry powder, carbon dioxide, alcohol-resistant foam

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
Hydrogen chloride, carbon oxides, nitrogen oxides
The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:
Avoid direct contact with water.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Breathing protection is mandatory. Avoid contact with the skin, eyes and clothing.

Environmental precautions

Substance/product is RCRA hazardous due to its properties. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

Spills should be contained, solidified, and placed in suitable containers for disposal.

7. Handling and Storage

Precautions for safe handling

Ensure thorough ventilation of stores and work areas. Protect against moisture.

Handle in accordance with good industrial hygiene and safety practice. Remove contaminated clothing and protective equipment before entering eating areas. Hands and/or face should be washed before breaks and at the end of the shift. When using do not eat, drink or smoke.

Protection against fire and explosion:
Avoid all sources of ignition: heat, sparks, open flame. Ground all transfer equipment properly to prevent electrostatic discharge.

Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Containers should be stored tightly sealed in a dry place. Avoid extreme heat. Keep container tightly closed and dry; store in a cool place. Keep away from sources of ignition - No smoking.

Storage stability:
Storage duration: 12 Months
From the data on storage duration in this safety data sheet no agreed statement regarding the warrantee of application properties can be deduced.
Protect against moisture.

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

hydrochloric acid	OSHA PEL	CLV 5 ppm 7 mg/m3 ; CLV 5 ppm 7 mg/m3 ;
	ACGIH TLV	CLV 2 ppm ;

Advice on system design:
Provide local exhaust ventilation to control vapours/mists.

Personal protective equipment

Respiratory protection:
Respiratory protection in case of vapour/aerosol release.

Hand protection:
Chemical resistant protective gloves

Eye protection:
Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:
Body protection must be chosen based on level of activity and exposure.

full protection suit with breathing-air supply (f.e. according to EN 943)

General safety and hygiene measures:
Wear protective clothing as necessary to prevent contact. Do not inhale gases/vapours/aerosols. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Store work clothing separately. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Form:	liquid	
Odour:	pungent odour	
Odour threshold:	not determined	
Colour:	colourless	
pH value:	No data available.	
Melting point:	< -50 °C	
Boiling point:	100 °C (28 mbar)	
Flash point:	86.5 °C	(DIN EN 22719; ISO 2719)
Flammability:	Combustible liquid.	
Lower explosion limit:	5.4 %(V)	
Upper explosion limit:	9.9 %(V)	
Autoignition:	353 °C	(DIN EN 14522)

Vapour pressure:	2 mbar (51 °C)	
Density:	0.95 g/cm3 (20 °C)	
Relative density:	0.9513 (20 °C)	(OECD Guideline 109)
Partitioning coefficient n-octanol/water (log Pow):	3.90 (25 °C)	(calculated)
Information on: Neodecanoic acid		
Partitioning coefficient n-octanol/water (log Pow):	3.83 (25 °C)	(OECD Guideline 117)

Self-ignition temperature:	Based on its structural properties the product is not classified as self-igniting.
Thermal decomposition:	350 °C, > 140 kJ/kg (DSC (DIN 51007)) Thermal decomposition above the indicated temperature is possible. It is not a self-decompositionable substance.
Viscosity, dynamic:	2.42 mPa.s (20 °C)
Particle size:	The substance / product is marketed or used in a non solid or granular form.
Molar mass:	190.71 g/mol
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.

10. Stability and Reactivity

Reactivity

Corrosion to metals:
Corrosive effect on metals.

Reactions with water/air:	Reaction with:	water
	Flammable gases:	no
	Toxic gases:	yes
	Which toxic gases:	hydrogen chloride (HCl)
	Corrosive gases:	yes
	Which corrosive gases:	hydrogen chloride (HCl)
	Smoke or fog:	yes
	Type of smoke or fog:	Hydrochloric acid
	Which Peroxides:	
Formation of flammable gases:	Remarks:	Forms no flammable gases in the presence of water.

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
The product is chemically stable.

Conditions to avoid

Avoid direct sunlight. Avoid electro-static charge. Avoid humidity. Avoid heat. Avoid prolonged storage. Disregard of the conditions mentioned may result in undesirable decomposition reactions.

Incompatible materials
bases, alkaline reactive substances, amines, water, alcohols

Hazardous decomposition products

Decomposition products:
Hazardous decomposition products: Hydrogen chloride

Thermal decomposition:
350 °C (DSC (DIN 51007))
Thermal decomposition above the indicated temperature is possible. It is not a self-decompositionable substance.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: Of moderate toxicity after single ingestion. Of very high toxicity after short-term inhalation.

Oral
Type of value: LD50
Species: rat (male/female)
Value: 1,760 mg/kg (OECD Guideline 401)
The substance was tested in olive oil.

Inhalation
Type of value: LC50
Species: rat (male/female)
Value: approx. 0.4 mg/l (OECD Guideline 403)
Exposure time: 4 h
The vapour was tested.

Assessment other acute effects
Assessment of STOT single:
Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Irritation / corrosion
Assessment of irritating effects: Corrosive! Damages skin and eyes.

Skin
Species: rabbit
Result: Corrosive.
Method: OECD Guideline 404

Eye
Result: Risk of serious damage to eyes.
As the product corrodes the skin, it can be expected to have a similar effect on the eyes also.

Sensitization
Assessment of sensitization: Sensitization after skin contact possible. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Mouse Local Lymph Node Assay (LLNA)
Species: mouse
Result: sensitizing
Method: OECD Guideline 429
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aspiration Hazard
not applicable

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: No data available.

Genetic toxicity
Assessment of mutagenicity: The substance was not mutagenic in bacteria.

Carcinogenicity
Assessment of carcinogenicity: No data was available concerning carcinogenic activity.

Reproductive toxicity
Assessment of reproduction toxicity: No data available.

Teratogenicity
Assessment of teratogenicity: No data available.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Medical conditions aggravated by overexposure
Data available do not indicate that there are medical conditions that are generally recognized as being aggravated by exposure to this substance/product. See MSDS section 11 - Toxicological information.

12. Ecological Information

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity:
Acutely harmful for aquatic organisms.

Toxicity to fish
LC50 (96 h) 138 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 84/449/EEC, C.1, static)

The statement of the toxic effect relates to the analytically determined concentration. The product may hydrolyse. The test result maybe partially due to degradation products. The product will cause changes in the pH value of the test system. The result refers to an unneutralized sample. After neutralization no appreciable reduction in harmful effect can be observed.

LC50 (96 h) 37.2 mg/l, Oncorhynchus mykiss (OECD Guideline 203, semistatic)
The statement of the toxic effect relates to the analytically determined concentration. The product has not been tested. The statement has been derived from the properties of the hydrolysis products.

Aquatic invertebrates
EL50 (48 h) 47.1 mg/l, Daphnia magna (static)
The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. Literature data. The product has not been tested. The statement has been derived from the properties of the hydrolysis products.

Aquatic plants
EC50 (72 h) 388 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201)
The statement of the toxic effect relates to the analytically determined concentration. The product has not been tested. The statement has been derived from the properties of the hydrolysis products. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Literature data.

No observed effect concentration (72 h) 226 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201)
The statement of the toxic effect relates to the analytically determined concentration. The product has not been tested. The statement has been derived from the properties of the hydrolysis products. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Literature data.

Persistence and degradability

Assessment biodegradation and elimination (H2O)
Not readily biodegradable (by OECD criteria). Poorly biodegradable. The product has not been tested. The statement has been derived from the properties of the hydrolysis products. Literature data.

Elimination information

11 % BOD of the ThOD (28 d) (OECD 301F; ISO 9408; 92/69/EEC, C.4-D) (aerobic, activated sludge, domestic)

Assessment of stability in water
In contact with water the substance will hydrolyse rapidly.

Information on Stability in Water (Hydrolysis)
$t_{1/2}$ < 0.5 h (0 °C, pH value 4), (OECD Guideline 111, pH 4)

Bioaccumulative potential

Bioaccumulation potential
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is possible. The data refer to the uncharged form of the substance. The product has not been tested. The statement has been derived from the properties of the hydrolysis products.

Mobility in soil

Assessment transport between environmental compartments

The substance will not evaporate into the atmosphere from the water surface.
Adsorption to solid soil phase is not expected.

Additional information

Other ecotoxicological advice:
The product has not been tested. The statements has been derived from the properties of the hydrolysis products.

13. Disposal considerations

Waste disposal of substance:
Incinerate in a RCRA-licensed facility. Dispose of in a RCRA-licensed facility. Do not discharge into drains/surface waters/groundwater.

Container disposal:
Empty containers with less than 1 inch of residue may be landfilled at a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers. If containers are not empty, they must be disposed of in a RCRA-licensed facility.

RCRA: D002

14. Transport Information

Land transport
USDOT

Hazard class:	6.1
Packing group:	II
ID number:	UN 2927
Hazard label:	6.1, 8
Proper shipping name:	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (contains NEODECANOYL CHLORIDE)

Sea transport
IMDG

Hazard class:	6.1
Packing group:	II
ID number:	UN 2927
Hazard label:	6.1, 8
Marine pollutant:	NO
Proper shipping name:	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (contains NEODECANOYL CHLORIDE)

Air transport
IATA/ICAO

Hazard class:	6.1
Packing group:	II
ID number:	UN 2927
Hazard label:	6.1, 8
Proper shipping name:	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (contains NEODECANOYL CHLORIDE)

15. Regulatory Information

Federal Regulations

Registration status:
Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Fire; Acute; Reactivity

EPCRA 313:

CAS Number	Chemical name
7647-01-0	hydrochloric acid
75-44-5	carbonyl chloride

CERCLA RQ	CAS Number	Chemical name
5000 LBS	7647-01-0	hydrochloric acid
10.0 LBS	75-44-5	carbonyl chloride

NFPA Hazard codes:
Health : 3 Fire: 2 Reactivity: 2 Special: -W-

HMIS III rating
Health: 3 Flammability: 2 Physical hazard: 2

Assessment of the hazard classes according to UN GHS criteria (most recent version):

Aquatic Acute	3	Hazardous to the aquatic environment - acute
Acute Tox.	1 (Inhalation - vapour)	Acute toxicity
Acute Tox.	4 (oral)	Acute toxicity
Skin Corr./Irrit.	1B	Skin corrosion/irritation
Flam. Liq.	4	Flammable liquids
Met. Corr.	1	Corrosive to metals
Aquatic Chronic	3	Hazardous to the aquatic environment - chronic
Skin Sens.	1	Skin sensitization
Eye Dam./Irrit.	1	Serious eye damage/eye irritation

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2016/06/17

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